

This listing of claims will replace all prior versions and listings of claims in the application:

1-40. (CANCELED)

41. (Previously Presented) A recombinant, non-replicative, non-infectious, lentiviral transfer vector, comprising:

non-infectious lentiviral nucleic acids, wherein the vector is deprived of functional genes encoding lentiviral Gag, Pol, and Env proteins;

a polynucleotide comprising a lentiviral, cis-acting central initiation region, which is the central polypurine tract ("cPPT"), and a lentiviral, cis-acting termination region, which is the central terminator sequence ("CTS"), wherein the cPPT and CTS are for formation of a DNA triplex, and wherein the cPPT and CTS are derived from a retrotransposon;

a defined nucleotide sequence (transgene or sequence of interest); and regulatory signals for reverse transcription, expression, and packaging, wherein said regulatory signals are of retroviral or retroviral-like origin;

and wherein the DNA triplex transfers the defined nucleotide sequence into the nucleus of a cell.

42. (Previously Presented) A recombinant vector according to claim 41, wherein the transgene or the sequence of interest is contained in an expression cassette comprising regulatory signals for transcription and expression.

43. (Previously Presented) A recombinant vector according to claim 41, wherein the regulatory signals for reverse transcription, expression, and packaging, and

the polynucleotide comprising the cPPT and CTS regions are derived from an HIV-type retrovirus.

44. (Previously Presented) A recombinant vector according to claim 41, wherein the lentiviral nucleic acids are HIV-1 or HIV-2 nucleic acids, and the regulatory signals consist of HIV-1 or HIV-2 nucleic acids.

45. (Previously Presented) A recombinant vector according to claim 41, wherein the polynucleotide is a DNA sequence comprising the cis-acting central initiation region (cPPT) and the termination region (CTS) of an HIV-1 retroviral genome.

46. (Previously Presented) A recombinant vector according to claim 41, wherein the polynucleotide comprises the cPPT and CTS regions of a sequence selected from SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, and SEQ ID NO: 33, or one of these sequences mutated by deletion or insertion of one or more nucleotides, provided that the polynucleotide permits the formation of a triplex on reverse transcription of the vector under the control of suitable regulatory elements.

47-49. (Cancelled)

50. (Previously Presented) A recombinant vector according to claim 41, wherein the regulatory signals for reverse transcription, expression and packaging, and the polynucleotide comprising the cPPT and CTS regions are derived from a yeast retrotransposon.

51. (Previously Presented) A recombinant cell comprising a vector according to claim 41.

52-65. (Cancelled)

66. (Previously Presented) A recombinant, non-replicative, non-infectious, lentiviral transfer vector, comprising:

non-infectious lentiviral nucleic acids, wherein the vector is deprived of functional genes encoding lentiviral Gag, Pol, and Env proteins;

a polynucleotide comprising a lentiviral, cis-acting central initiation region, which is the central polypurine tract ("cPPT"), and a lentiviral, cis-acting termination region, which is the central terminator sequence ("CTS"), wherein the cPPT and CTS are for formation of a DNA triplex;

a defined nucleotide sequence (transgene or sequence of interest); and regulatory signals for reverse transcription, expression, and packaging, wherein said regulatory signals are of retroviral or retroviral-like origin;

and wherein the DNA triplex transfers the defined nucleotide sequence into the nucleus of a cell.

67. (Previously Presented) A recombinant vector according to claim 66, wherein the transgene or the sequence of interest is contained in an expression cassette comprising regulatory signals for transcription and expression.

68. (Previously Presented) A recombinant vector according to claim 66, wherein the regulatory signals for reverse transcription, expression, and packaging, and the polynucleotide comprising the cPPT and CTS regions are derived from an HIV-type retrovirus.

69. (Previously Presented) A recombinant vector according to claim 68, wherein the lentiviral nucleic acids are HIV-1 or HIV-2 nucleic acids, and the regulatory signals consist of HIV-1 or HIV-2 nucleic acids.

70. (Previously Presented) A recombinant vector according to claim 66, wherein the polynucleotide is a DNA sequence comprising the cis-acting central initiation region (cPPT) and the termination region (CTS) of an HIV-1 retroviral genome.

71. (Previously Presented) A recombinant vector according to claim 66, wherein the polynucleotide comprises the cPPT and CTS regions of a sequence selected from SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, and SEQ ID NO: 33, or one of these sequences mutated by deletion or insertion of one or more nucleotides, provided that the polynucleotide permits the formation of a triplex on reverse transcription of the vector under the control of suitable regulatory elements.

72. (Previously Presented) A recombinant vector according to claim 66, wherein the regulatory signals for reverse transcription, expression and packaging, and the polynucleotide comprising the cPPT and CTS regions are derived from a yeast retrotransposon.

73. (Previously Presented) A recombinant cell comprising a vector according to claim 66.

74-77. (Cancelled)